

SETAC Conference Report

Golden Gate Bridge Between LCA Group and Other SETAC Groups?

LCA on SETAC 18th Annual Meeting 1997 in San Francisco, California, USA

The annual meeting of the Society of Environmental Toxicology and Chemistry (SETAC) in San Francisco, 16 until 20 November 1997, included three days of life cycle assessment (LCA) activities: courses, poster session, and lectures. The unofficial top theme was life cycle impact assessment (LCIA). Two four hour courses about inventory analysis (LCI) and impact assessment took place on November 16.

The LCIA course on November 16 was organized by MARY ANN CURRAN of the United States Environmental Protection Agency. The official course description created the expectation that the course would give a comprehensive overview about International Standard (ISO) 14042 (LCIA) and the whole ISO 14000 series. The course booklet contained three ISO drafts about inventory, LCIA, and interpretation. The oral presentations were limited to the description of some scientific disadvantages of ISO 14042. The political "hot spot" comparative assertions (based on LCIA) was only covered by a marginal note.

Most of the course was dedicated to the Life-Cycle Stressor-Effects Assessment (LCSEA) method. STANLEY RHODES (President and Chief Executive Officer of Scientific Certification Systems, Oakland, California, USA) presented a list of 35 impact categories for the LCSEA method which should replace LCIA. FJALAR KOMMONEN (Soil and Water Ltd, Helsinki, Finland) gave additional information about LCSEA. According to the presented information in the course and in the course booklet, more than 70 percent of the 35 impact categories of the LCSEA method are not described ("Section to be written" in LCSEA "Practitioner's Manual") or not documented in a way that an LCA practitioner could use it for making an LCA or LCIA. The official course abstract defined as one objective the illustration of the LCSEA method by application examples. Nevertheless, LCSEA studies applying LCSEA were not presented in the course.

RICHARD DWOREK (US Steel, Ohio, USA) reported about actual concentrations (immissions, not emission masses) of sulfane (H_2S) and sulfur dioxide (SO_2) influenced by one US Steel plant. US Steel informs the neighbors of the plant by open house events and by several publications. Unfortunately, the work presented by DWOREK was neither a life cycle inventory nor an LCIA.

On November 18, WILLIAM OWENS (Procter & Gamble, Cincinnati, Ohio, USA) presented some findings of the LCIA work of SETAC in Anglo-America. LCA shall address to potential impacts, not actual impacts. Owens stressed several times the necessity of transparency. This indirect criticism about insufficient transparency is directed to the LCA engineers and the companies and institutions providing LCI or LCA to the public. Unfortunately, the American Plastics Council (Washington, District of Columbia, USA) will publish (probably in 1998, as announced by KATHLEEN MCBRIDE) LCI data of plastics with restricted transparency. As their European counterpart, the American Plastics Council will hide critical substances like chloroethene ($\text{C}_2\text{H}_3\text{Cl}$), an intermediate of the polyvinylchloride production, in "chlorinated organics".

The highlighting of weak points of several impact categories by OWENS could be interpreted as the drawing up of LCIA research perspectives. In this respect and in respect to the use of the word "state-of-the-art" in the title his lecture was similar to the West European LCA research proposal "LCANET" (published in 1997 in volume 1, number 1 of the Eco-Informa Press series "LCA Documents").

OWENS saw the main difference between inventory analysis and impact assessment in the inclusion of subjective values in LCIA. In his lecture, MATTHIAS FINKBEINER (PE Product Engineering, Dettingen unter Teck, Germany) gave another opinion. According to this speaker, the whole LCA includes subjective elements. Inventory analysis is to a substantial part subjective because of e.g. the subjective choice of the system boundaries or the allocation rules.

In a discussion about LCIA, OWENS showed optimism about the progress and usefulness of an international standard about LCIA. JAMES FAVA (Roy F. Weston, West Chester, Pennsylvania, USA) said that presently used LCIA methods might be wrong, but useful. FAVA considers an international standard about LCIA as a big advantage.

The only real LCA example presented by a representative of the industry came from Europe. ANTHONY TAYLOR (Unilever, England) outlined a company LCA with a preliminary LCIA excluding both, human toxicity and ecotoxicity. JOEL ANN TODD (The Scientific Consulting Group, Gaithersburg, Maryland, USA) emphasized in her lecture the importance of the inclusion of the impact categories human toxicity and ecotoxicity into every full and streamlined LCIA.

Research work about LCIA was summarized for the example impact category land use by MARTIN BAITZ (Institut für Kunststoffverarbeitung, IKP, Universität Stuttgart, Germany).

During the SETAC meeting, drinks and snacks were offered to the conference participants in one way cups and plates. It is not clear if SETAC did this according to the latest results of LCA. Reusing seems to be a problem.

The repeated use of results and making use of research capabilities of other SETAC groups seems to be a problem, too. The LCA group within SETAC is like an isolated island in an ocean, stated one visitor of the LCA session. The length of the poster session (only four hours) contributed to the isolation of the LCA group within SETAC. Since the Spanish foundation of San Francisco, it took about 160 years before the San Francisco peninsula was linked by bridges with the north of California. How long will it take to build bridges between the different engineering and science branches of SETAC? The main benefit for LCA would clearly be in the field of LCIA.

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